

ABSTRACT OF THE DISCLOSURE

The present invention relates to a modified radial motion method for modifying lengthwise curvature of face-milling spiral bevel and hypoid gears, which is capable of modifying a locus of a cutter center 5 into a curve, without changing a head cutter's geometry, by providing modified radial motion of the head cutter cooperating with rotation of a cradle. The modified radial motion method in accordance with the present invention completely solves the contradictions caused by the existing lengthwise curvature modification methods, which is able to 10 increase the adjustability of the gear set without reducing the tooth contact.